

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A compound that binds to leukocytes, wherein said compound is represented by the formula (1):



(wherein, in the formula (1),

Z represents a protecting group for an amino group;

Y represents Met or Nle; ~~in $(X)_n$;~~

X represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds; ~~and~~

n represents 1 or 0; ~~in $(NH_2)_m$;~~

NH₂ represents an amide group as a protecting group for a carboxyl group in the α position of Lys; ~~and~~

m represents 1 or 0; ~~in $\epsilon\text{-}(R\text{-}(T)_l\text{-}U)$;~~

R represents Ser or Thr binding to an ϵ -amino group of Lys through an amide bond; ~~and~~

T represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds; ~~and~~

l represents 1 or 0; ~~and~~

U represents a group which can be labeled with a metal;

with the proviso that said X and T may be the same or different from each other}.

2. (previously presented): The compound according to claim 1, wherein U in the formula (1) is a group consisting of a peptide represented by –Cys-A1-A2 (A1 and A2 are each an amino acid except for Cys and Pro), nitrogen-containing cyclic compounds with 8 to 20 carbon atoms, nitrogen-containing cyclic carboxylic acid compounds with 8 to 20 carbon atoms, derivatives of nitrogen-containing cyclic carboxylic acid compounds with 8 to 20 carbon atoms or alkylenamine carboxylic acids with 4 to 10 carbon atoms, which can be labeled with a metal.

3. (canceled).

4. (previously presented): The compound according to claim 1, wherein said compound represented by the formula (1) is one selected from the group consisting of:

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-Cys-Gly-Asn);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-Cys-Gly-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-1,4,8,11-tetraazacyclotetradecane-1,4,8,11-tetraacetic acid);

formyl-Nle-Leu-Phe-Lys(NH₂)-ε-(-Ser-D-Ser-Asn-D-Arg-Cys-Asp-Asp);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-diethylenetriamine pentaacetic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-1,4,8,11-tetraazacyclotetradecane-butyrinic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-1,4,8,11-tetraazacyclotetradecane-butyrinic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Ser-Asn-1,4,8,11-tetraazacyclotetradecane-butyrinic acid);

acetyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);

carbamyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp); and

methyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp).

5. (currently amended): A composition comprising a complex formed between a compound of formula (1) and a metal ion or a metal oxide of The compound according to claim 1-labeled with a radioactive metal or a paramagnetic metal, and a pharmaceutically acceptable carrier: wherein the compound is represented by the formula (1):



wherein, in the formula (1),

Z represents a protecting group for an amino group;

Y represents Met or Nle;

X represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds;

n represents 1 or 0;

NH₂ represents an amide group as a protecting group for a carboxyl group in the α position of Lys;

m represents 1 or 0;

R represents Ser or Thr binding to an ϵ -amino group of Lys through an amide bond;

T represents a spacer consisting of one or more of amino acids and/or synthetic organic compounds;

l represents 1 or 0; and U represents a group which can be labeled with a metal;

with the proviso that said X and T may be the same or different from each other.

6. (currently amended): The compositioneompound according to claim 5, wherein said radioactive metal is Tc-99m, In-111, Ga-67, CuCU-64 or Ga-68.

7. (currently amended): A method for imaging a site of vigorous leukocyte infiltration accompanied by immune reaction in an individual, said method comprising administering to an individual an effective amount of the compositioneompound according to claim 6 and conducting SPECT (single photon emission computed technology) or PET (positron emission tomography) imaging on the individual.

8-9. (canceled).

10. (currently amended): The compositioneompound according to claim 5, wherein said paramagnetic metal is Gd, Fe, Mn or Cu.

11. (currently amended): A method for imaging a site of vigorous leukocyte infiltration accompanied by immune reaction in an individual, said method comprising administering to said individual an effective amount of the compositioneompound according to claim 10 and conducting MRI (magnetic resonance imaging) on the individual.

12. (currently amended): The compositioneompound according to claim 5, wherein said radioactive metal is Y-90, Sn-117m, Sm-153, Re-186 or Re-188.

13. (currently amended): A method of radiotherapy, comprising administering to a patient in need of therapy an effective amount of the compositioneompound according to claim 12.

14. (previously presented): The compound according to claim 2, wherein said compound represented by the formula (1) is one selected from the group consisting of:

- formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-Cys-Gly-Asn);
- formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-Cys-Asp-Asp);
- formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-Cys-Gly-Asp);
- formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);
- formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-1,4,8,11-tetraazacyclotetradecane-1,4,8,11-tetraacetic acid);
- formyl-Nle-Leu-Phe-Lys(NH₂)-ε-(-Ser-D-Ser-Asn-D-Arg-Cys- Asp-Asp);
- formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-diethylenetriamine pentaacetic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-1,4,8,11-tetraazacyclotetradecane-butyrinic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-1,4,8,11-tetraazacyclotetradecane-butyrinic acid);

formyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Ser-Asn-1,4,8,11-tetraazacyclotetradecane-butyrinic acid);

acetyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp);

carbamyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp); and

methyl-Nle-Leu-Phe-Nle-Tyr-Lys(NH₂)-ε-(-Ser-D-Arg-Asp-Cys-Asp-Asp).

15. (previously presented): A composition comprising the compound of any one of claims 5, 6, 10, or 12, and a pharmaceutically acceptable carrier.